WEGA V4810USA Model Canada Model

> UK Model AEP Model



Discard TA-5650 service manual previously issued for UK and AEP Models.

This service manual contains former information.

INTEGRATED STEREO AMPLIFIER

SPECIFICATIONS

GENERAL

120 V ac, 60 Hz (USA and Canada Power Requirements:

Model)
110, 127, 220 or 240 V ac adjustable,
50/60 Hz (UK and AEP Model)

Power Consumption:

160 W (USA Model)

320 VA (Canada Model) 440 W (UK and AEP Model)

Dimensions:

Approx. 460(w) x 168(h) x 323(d) mm

 $18^{1}/_{8}$ (w) x $6^{5}/_{8}$ (h) x $12^{3}/_{4}$ (d)

inches

Including projecting parts

and controls

Weight:

Approx. 13.4 kg, 29 lb 9 oz (net) Approx. 16 kg, 35 lb 4 oz (in shipping

carton)

POWER AMPLIFIER SECTION

Continous RMS

Power Output: (less than 0.1 % THD, both channels driven

At 1 kHz 60 + 60 W (8 Ω) 50 + 50 W (4 Ω) At 20 Hz – 20 kHz

simultaneously)

50 + 50 W (8 Ω)

according to DIN 45500 55 + 55 W (8 Ω)

Dynamic Power

Output:

160 W (8 Ω) 140 W (4 Ω)

(IHF constant power

supply method)

Power Bandwidth

5 - 40,000 Hz

Harmonic Distortion:

Less than 0.1 % at rated output Less than 0.08 % at 1 W output

IM Distortion: (60 Hz: 7 kHz = 4:1)

Less than 0.1 % at rated output Less than 0.08 % at 1 W output

Frequency Response

(at 1 W output):

 $2 Hz - 100 kHz_{-2}^{+0} dB$

S/N Ratio:

Greater than 110 dB, short-circuited input

Residual Noise:

Less than 0.02 μ W (8 Ω)

Damping Factor:

50 (8 Ω , at 1 kHz)

POWER INPUT

Inputs:

Sensitivity 1 V RMS (for rated

output), impedance 50 k Ω

Outputs:

SPEAKER terminals A, B

Accept speakers of 4 Ω or more HEADPHONES jack

Accepts low-and high-impedance

stereo headphones

- continued on page 2 -

0 dB = 0.775 V

SONY SERVICE MANUAL 98

PREAMPLIFIER SECTION

Harmonic Distortion:

Less than 0.05 % at rated output Less than 0.05 % at rated output

IM Distortion: $(60 \, \text{Hz} : 7 \, \text{kHz} = 4 : 1)$

Frequency Response:

PHONO 1, 2 RIAA equalization ±0.5 dB

TUNER AUX 1, 2, 3 TAPE 1, 2 REC/PB (input) EXT ADPT 1, 2

10 Hz -10 Hz = 100 kHz⁺⁰₋₂ dB (TONE: CANCEL)

Tone Controls: BASS:

±10 dB at 50 Hz (TURNOVER 250 Hz) ±10 dB at 100 Hz (TURNOVER 500 Hz) TREBLE:

±10 dB at 10 kHz (TURNOVER 2.5 kHz) ±10 dB at 20 kHz (TURNOVER 5 kHz)

Filters: LOW:

12 dB/octave attenuation below 30 Hz HIGH:

12 dB/octave attenuation above 9 kHz

Loudness switch: (att. 30 dB)

+ 10 dB at 50 Hz +3dB at 10kHz

Inputs:

	Sensitivity	Impedance	Maximum input capability*	S/N (weighting network)
PHONO 1, 2	2.5 mV	50 k ohms	300 mV	greater than 70 dB (B)
AUX 1, 2, 3 TAPE 1, 2 REC/PB (input) EXT ADPT 1, 2(input)	150mV	250k ohms		greater than 90 dB (A)

^{*} The maximum input capability is measured at a 0.05% harmonic

Outputs:

	Output voltage	Impedance
REC OUT 1, 2	150 mV	4.7 k ohms
PRE OUTPUT	1 V	1 k ohm
REC/PB	17 mV	82 k ohms
EXT ADPT 1, 2	150 mV	4.7 k ohms

Specification Labels:

USA Model

SONY®	l
	١,

INTEGRATED STEREO AMPLIFIER MODEL NO. TA - 5650 AC 120V 60Hz 160 W SERIAL NO. MADE IN JAPAN

Canada Model

SONY

INTEGRATED STEREO AMPLIFIER MODEL NO. TA - 5650 320VA 120V 60Hz SERIAL NO. MADE IN JAPAN

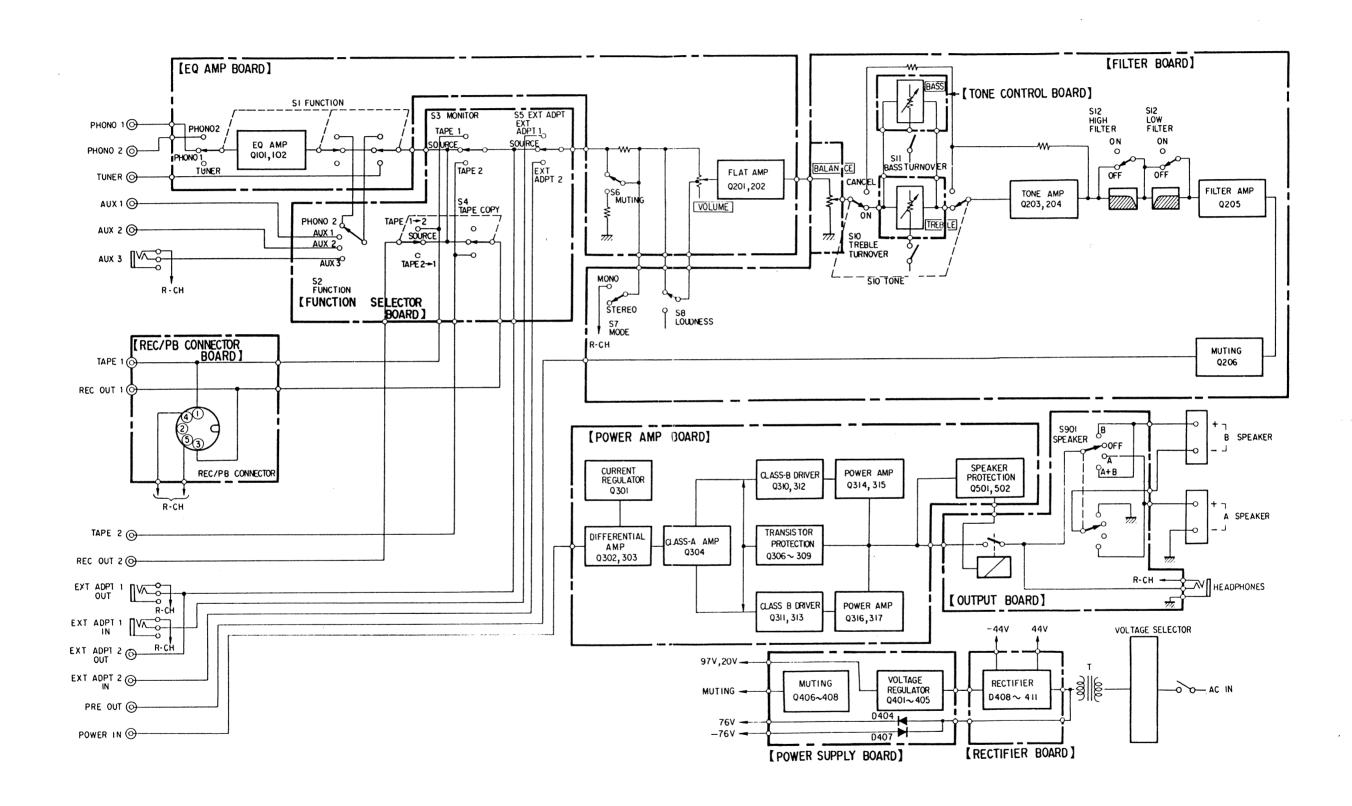
UK and AEP Models

SONY

INTEGRATED STEREO AMPLIFIER MODEL NO. TA-5650 AC 110.127.220.240V~ 50/60Hz 440W SERIAL NO. ٠ķ٠ MADE IN JAPAN

Note: * UK Model: Serial No. 600,001 and later AEP Model: Serial No. 500,001 and later

SECTION 1
BLOCK DIAGRAM



4 -

SECTION 2 ADJUSTMENT

Note: Turn the power switch on and allow about five minutes for warm-up the set.

2-1. 20 V POWER VOLTAGE ADJUSTMENT

With no input signal, adjust RT401 so that the emitter voltage of Q403 becomes 20 V.

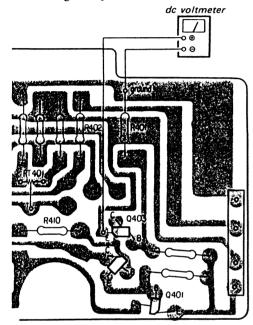


Fig. 2-1. 20 V power voltage adjustment

2-2. 97 V POWER VOLTAGE CONFIRMATION

After 20 V power voltage adjustment, confirm that the emitter voltage of Q401 shows $97 V \pm 3 V$.

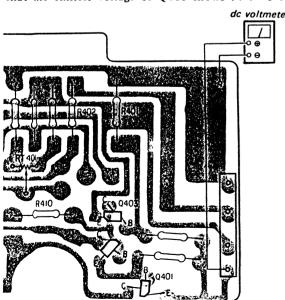


Fig. 2-2. 97 V power voltage confirmation

2-3. CONFIRMATION OF DC BALANCE VOLTAGE

- 1. Set the SPEAKER switch to "A" position.
- Connect the dc voltmeter across the SPEAKER OUT "A".
- 3. Confirm that the dc voltage at SPEAKER OUT "A" shows $0V \pm 50 \text{ mV}$.

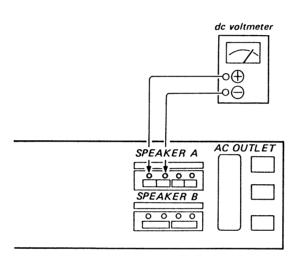


Fig. 2-3. Confirmation of dc balance voltage

2-4. DC BIAS ADJUSTMENT

Adjust RT301 and RT351 for 90 mV reading on the meter with no input signal.

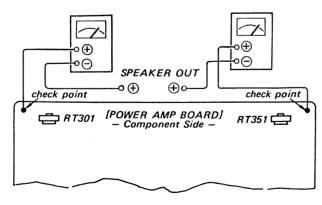


Fig. 2-4. DC bias adjustment

2-5. CHASSIS LAYOUT

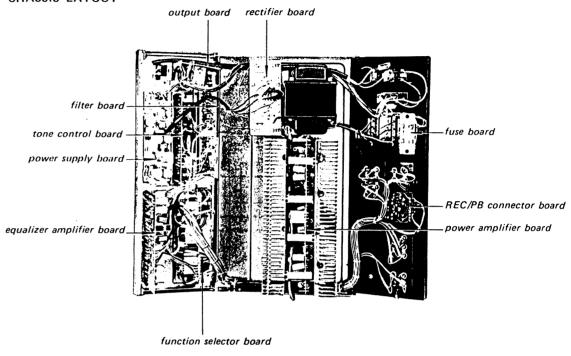
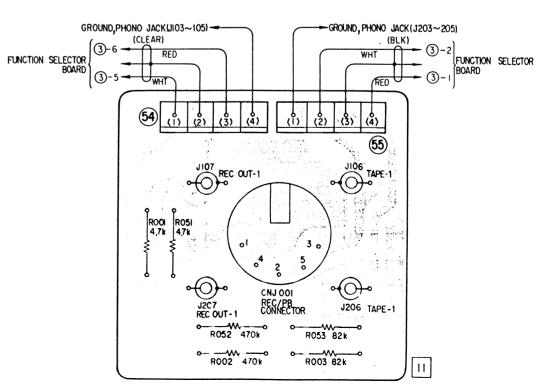


Fig. 2-5. Chassis layout

SECTION 3 MOUNTING AND SCHEMATIC DIAGRAMS

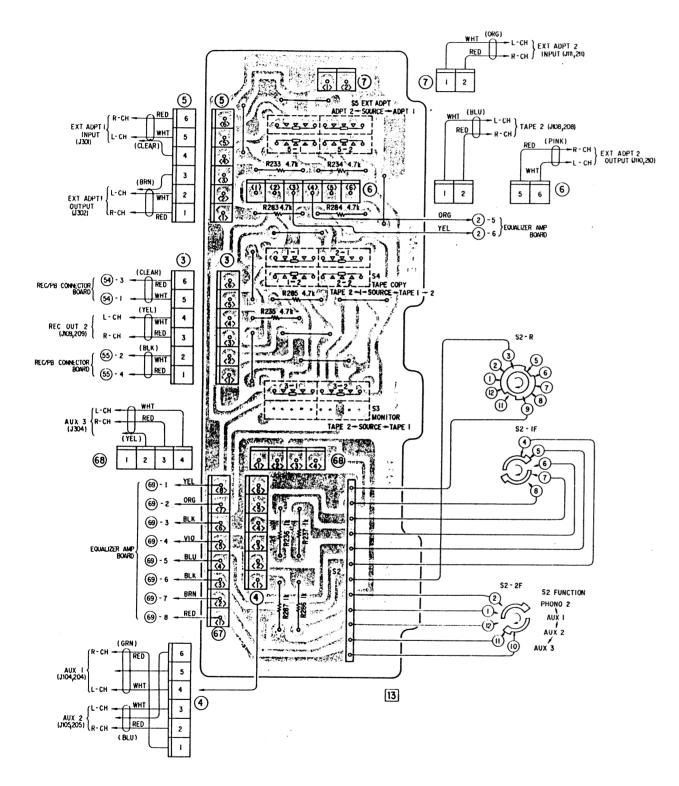
- 3-1. MOUNTING DIAGRAM REC/PB CONNECTOR BOARD -
 - Conductor Side -



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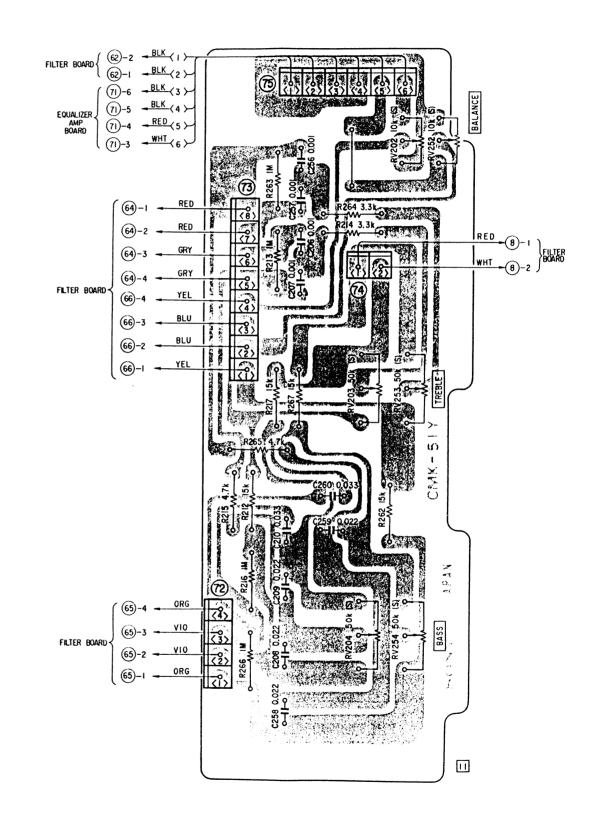
3-2. MOUNTING DIAGRAM - FUNCTION SELECTOR BOARD -

- Conductor Side -



3-3. MOUNTING DIAGRAM - TONE CONTROL BOARD -

- Conductor Side -



3-5. MOUNTING DIAGRAM - FILTER BOARD -

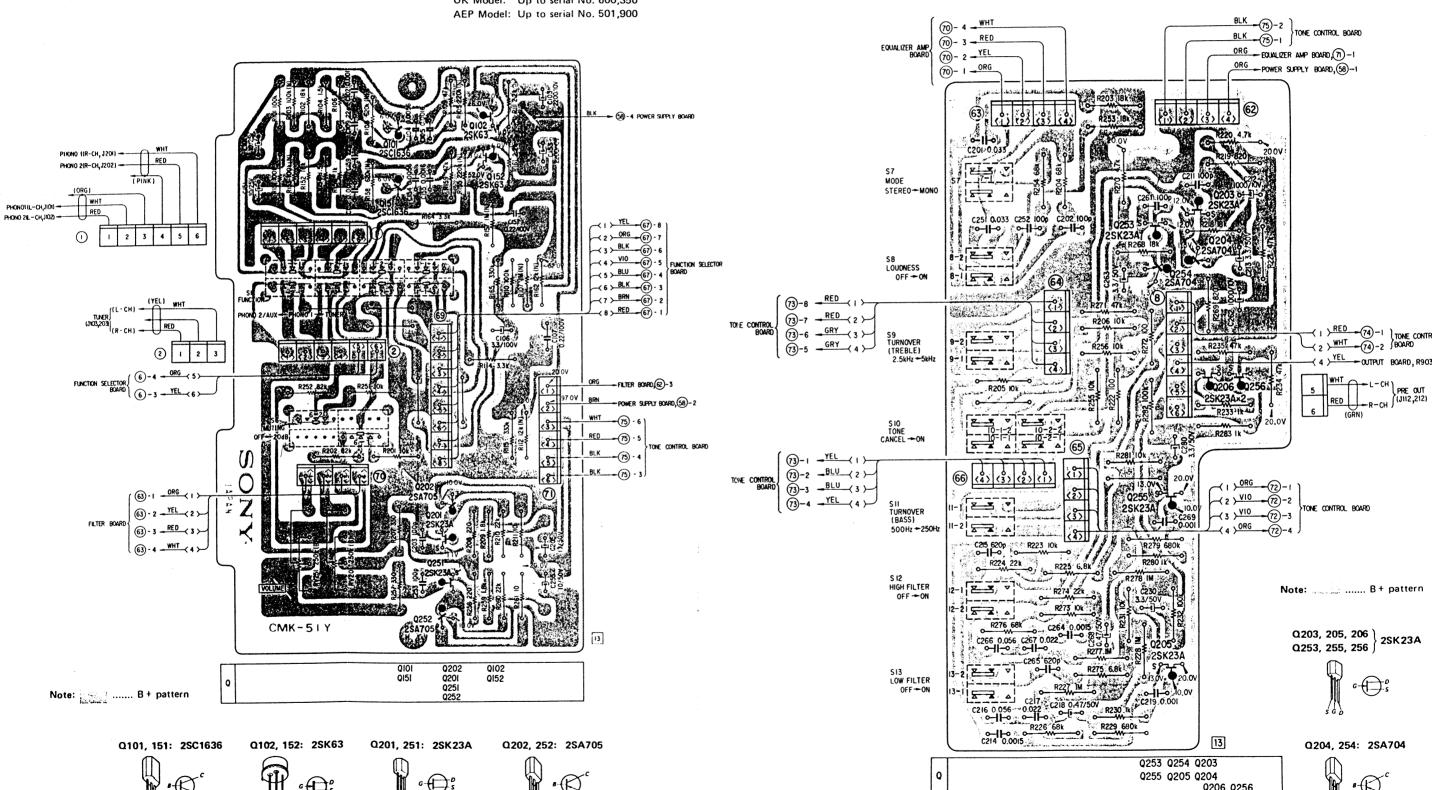
- Conductor Side -

UK Model: Up to serial No. 600,350 AEP Model: Up to serial No. 501,900

3-4. MOUNTING DIAGRAM - EQUALIZER AMPLIFIER BOARD -

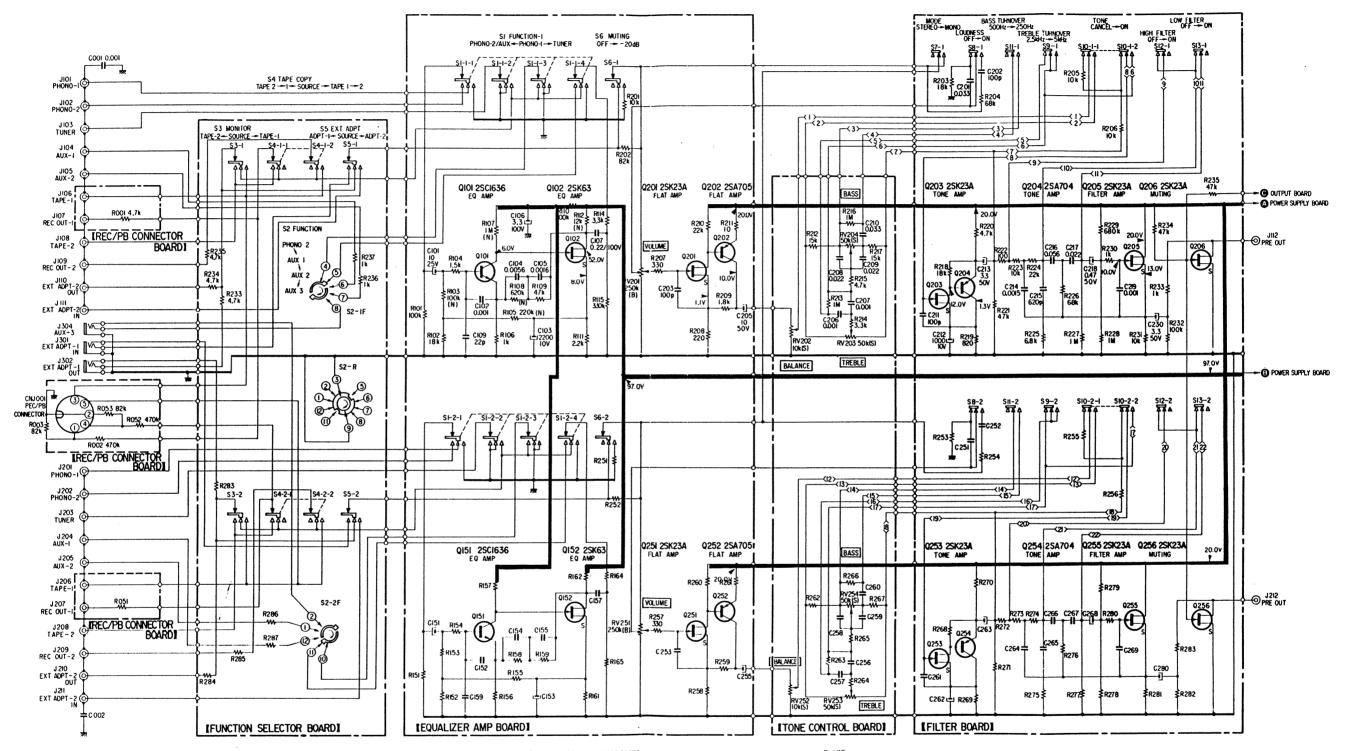
- Conductor Side -

UK Model: Up to serial No. 600,350



3-6. SCHEMATIC DIAGRAM - PREAMPLIFIER SECTION -

UK Model: Up to Serial No. 600,350 AEP Model: Up to Serial No. 501,900



- S1----FUNCTION (PHONO I)
 S2----FUNCTION (PHONO 2)
 S3-----MONITOR (SOURCE)
 S4----TAPE COPY (SOURCE)
 S5-----EXT ADPT (SOURCE)

- S6----MUTING (OFF) S7----MODE (STEREO)
- S8 --- LOUDNESS (OFF)
 S9 --- TREBLE TURNOVER (2.5kHz)
 S10--- TOME (CANCEL)
 S11--- BASS TURNOVER (500Hz)
 S12---HIGH FILTER (OFF)
 S13---LOW FILTER (OFF)

Note:

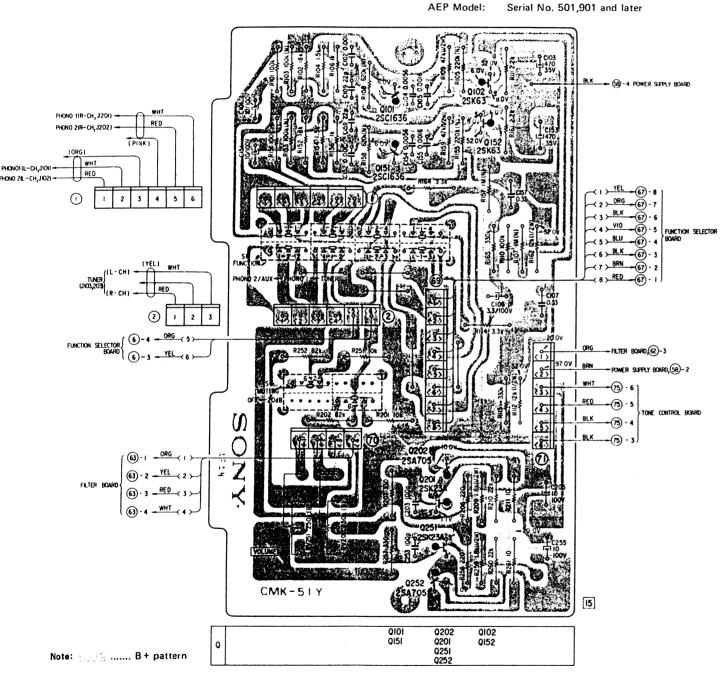
All resistance values are in ohms. k = 1,000, M = 1,000 k All capacitance values are in µF except as indicated with p, which means $\mu\mu F$.

All voltages are dc measured with a VOM which has an input impedance of 20 k ohms/volt. No signal in. Voltage variations may be noted due to normal production tolerances.

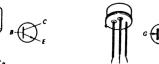


3-7. MOUNTING DIAGRAM - EQUALIZER AMPLIFIER BOARD -

- Conductor Side
USA Model: Serial No. 800,001 and later
Canada Model: Serial No. 700,001 and later
UK Model: Serial No. 600,351 and later



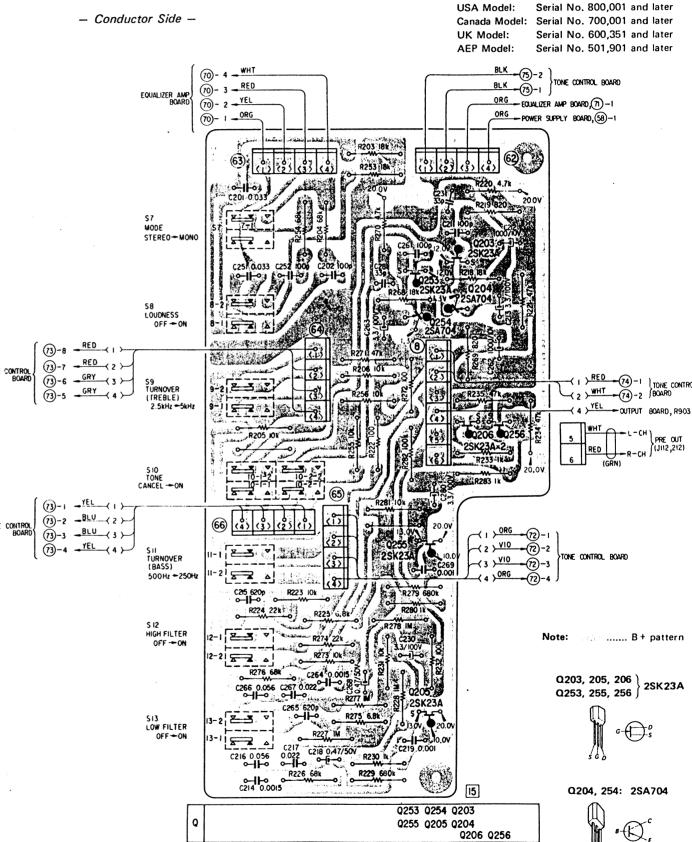
Q101, 151: 2SC1636 Q102, 152: 2SK63 Q201, 251: 2SK23A Q202, 252: 2SA705





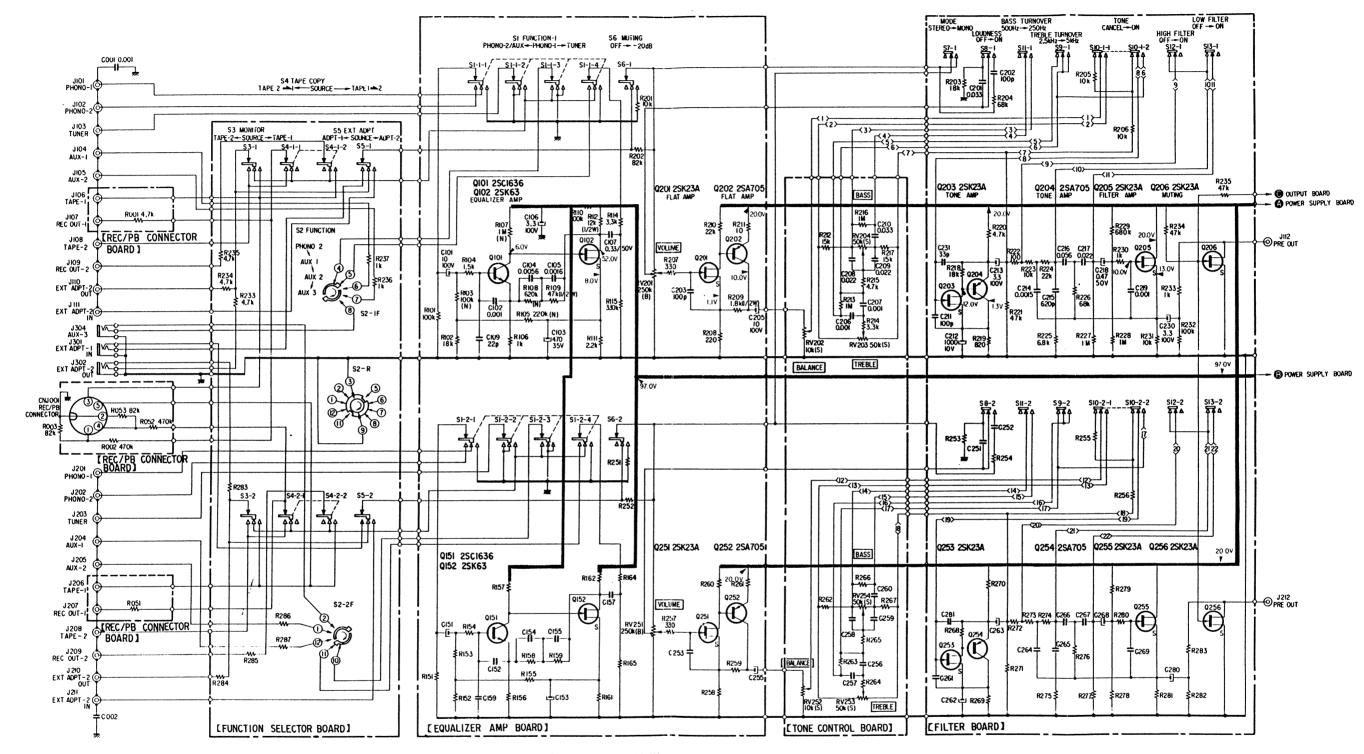


3-8. MOUNTING DIAGRAM — FILTER BOARD —



3-9. SCHEMATIC DIAGRAM - PREAMPLIFIER SECTION -

USA Model: Serial No. 800,001 and later Canada Model: Serial No. 700,001 and later Serial No. 600,351 and later UK Model: AEP Model: Serial No. 501,901 and later



- S1····FUNCTION (PHONO1)
 S2····FUNCTION (PHONO 2)
 S3····MONITOR (SOURCE)
 S4····TAFE CUPY (SOURCE)
 S5····EXT ADPT (SOURCE)
 S6····MITING (OFF)
 S7····MODE (STEREO)
- \$8 --- LOUDNESS (OFF)
 \$9 --- TREBLE TURNOVER (2.5kHz)
 \$10 --- TONE (CANCEL)
 \$11 --- BASS TURNOVER (500Hz)
 \$12 --- HIGH FILTER (OFF)
 \$13 --- LOW FILTER (OFF)

Note: All resistance values are in ohms. k = 1,000, M = 1,000 k

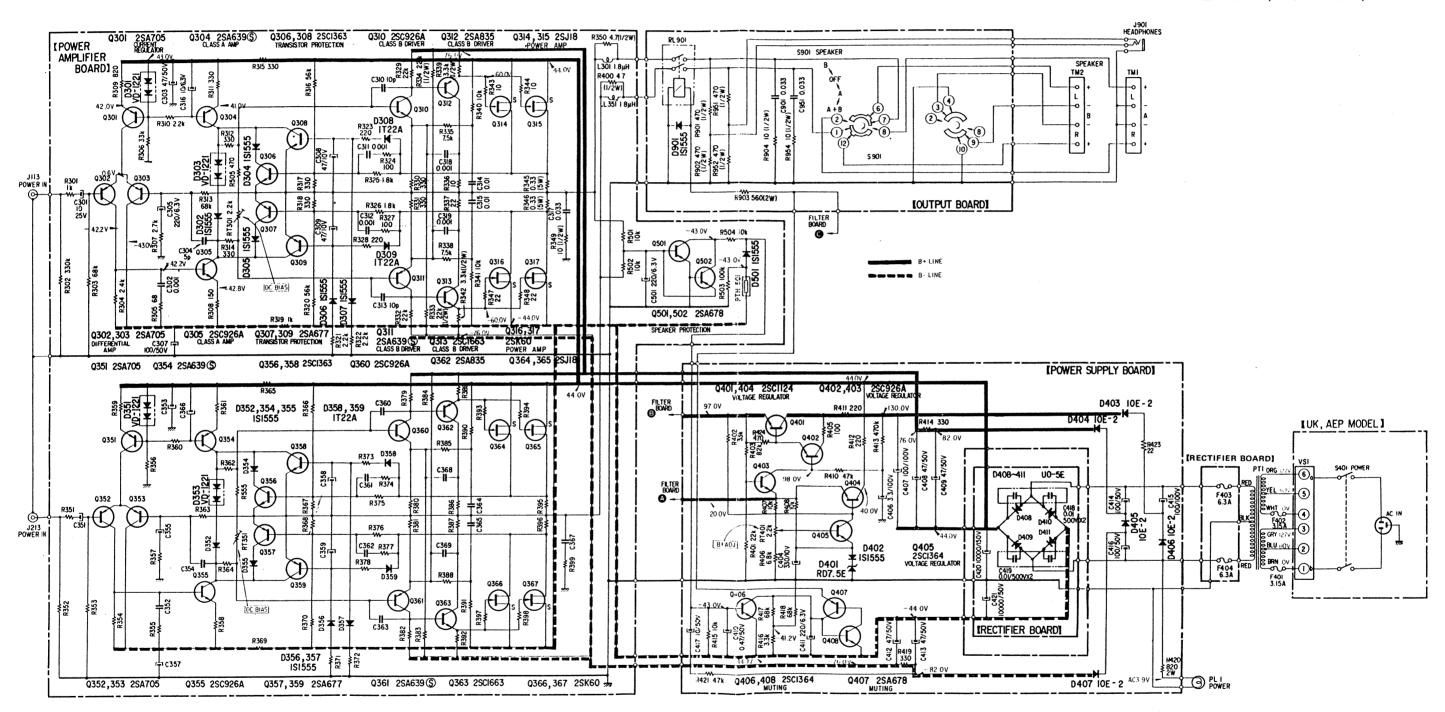
All capacitance values are in μF except as indicated with p, which means $\mu\mu F$.

All voltages are dc measured with a VOM which has an input impedance of 20 k ohms/volt. No signal in.

Voltage variations may be noted due to normal production tolerances.

3-10. SCHEMATIC DIAGRAM - POWER AMPLIFIER SECTION -

UK Model: Up to Serial No. 600,350 AEP Model: Up to Serial No. 501,900



Note:

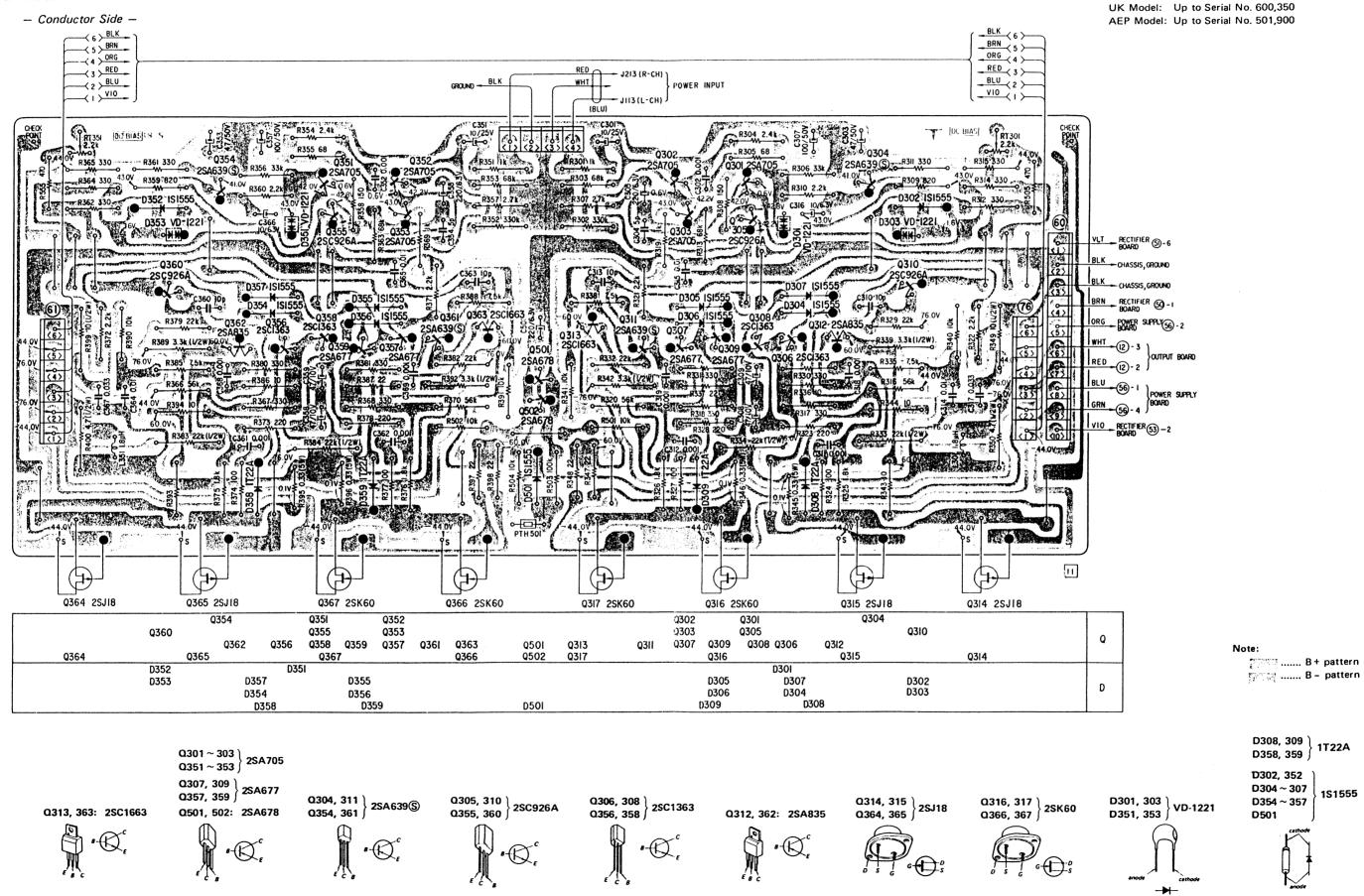
All resistance values are in ohms. k = 1,000, M = 1,000 k All capacitance values are in μF except as indicated with p, which means $\mu \mu F$.

All voltages are dc measured with a VOM which has an input impedance of 20 k ohms/volt. No signal in.

Voltage variations may be noted due to normal production tolerances.







- 20 -

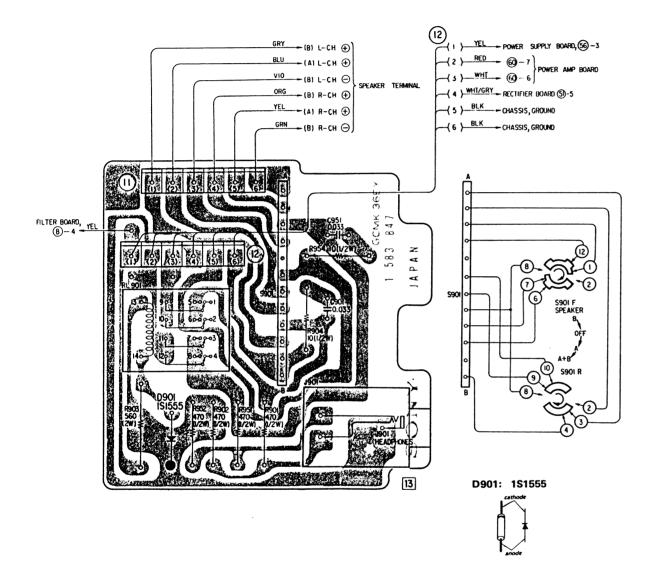




3-12. MOUNTING DIAGRAM - OUTPUT BOARD -

- Conductor Side -

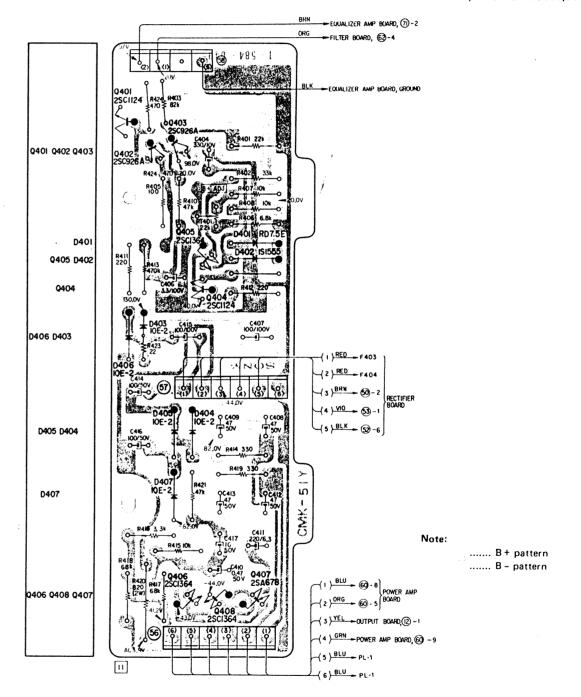
UK Model: Up to Serial No. 600,350 AEP Model: Up to Serial No. 501,900

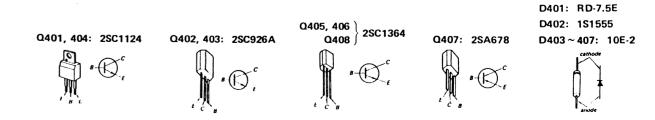


3-13. MOUNTING DIAGRAM - POWER SUPPLY BOARD -

- Conductor Side -

UK Model: Up to Serial No. 600,350 AEP Model: Up to Serial No. 501,900

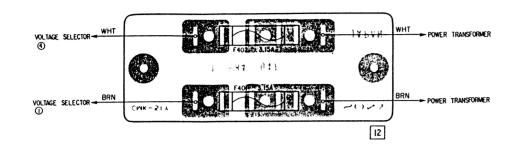


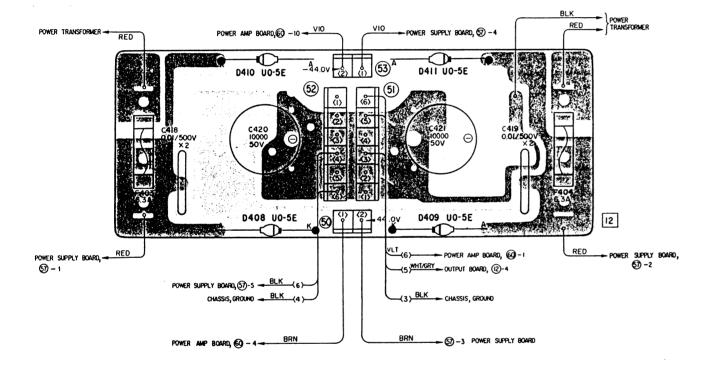


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3-14. MOUNTING DIAGRAM - RECTIFIER/FUSE BOARDS -

- Component Side -



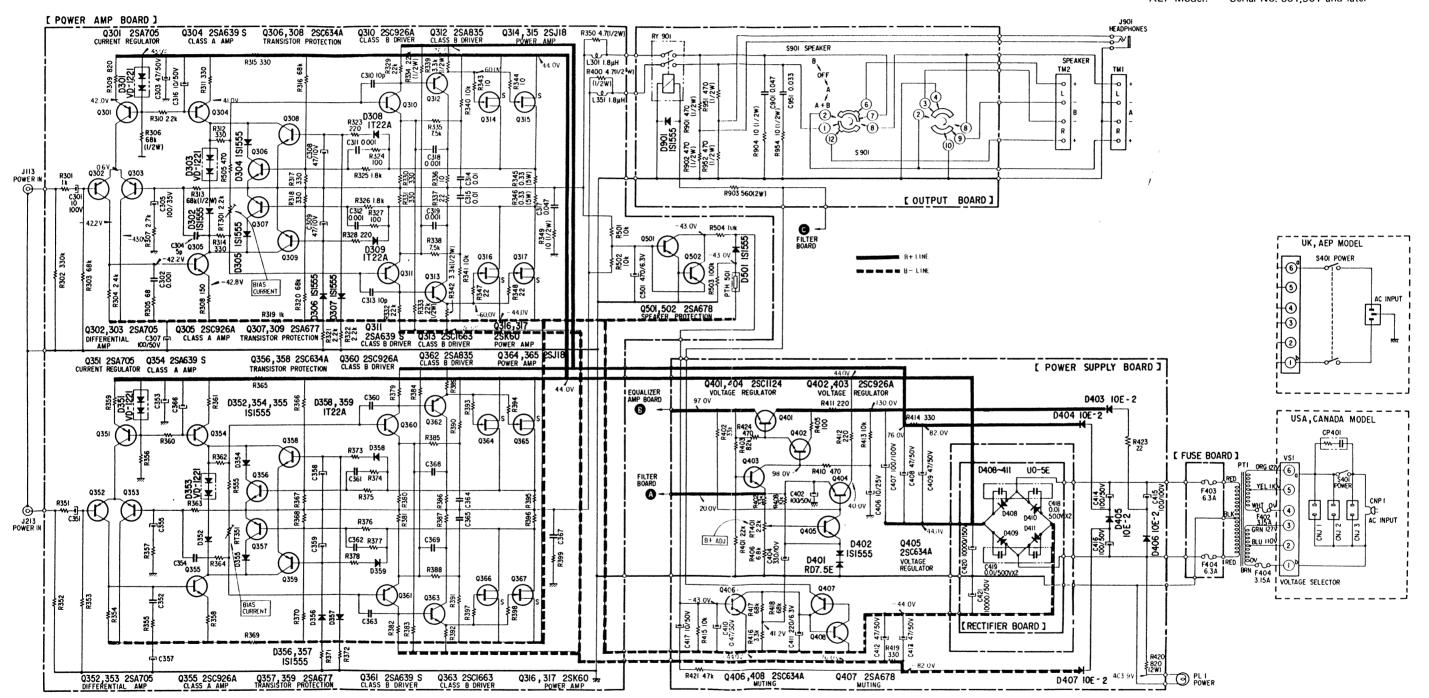


		D408, 409) D410, 411 } UO-5I
Note:	B + pattern B - pattern	cathode
	b - pattern	anode

MEMO	

3-15. SCHEMATIC DIAGRAM - POWER AMPLIFIER SECTION -

USA Model: Serial No. 800,001 and later Canada Model: Serial No. 700,001 and later UK Model: Serial No. 600,351 and later AEP Model: Serial No. 501,901 and later



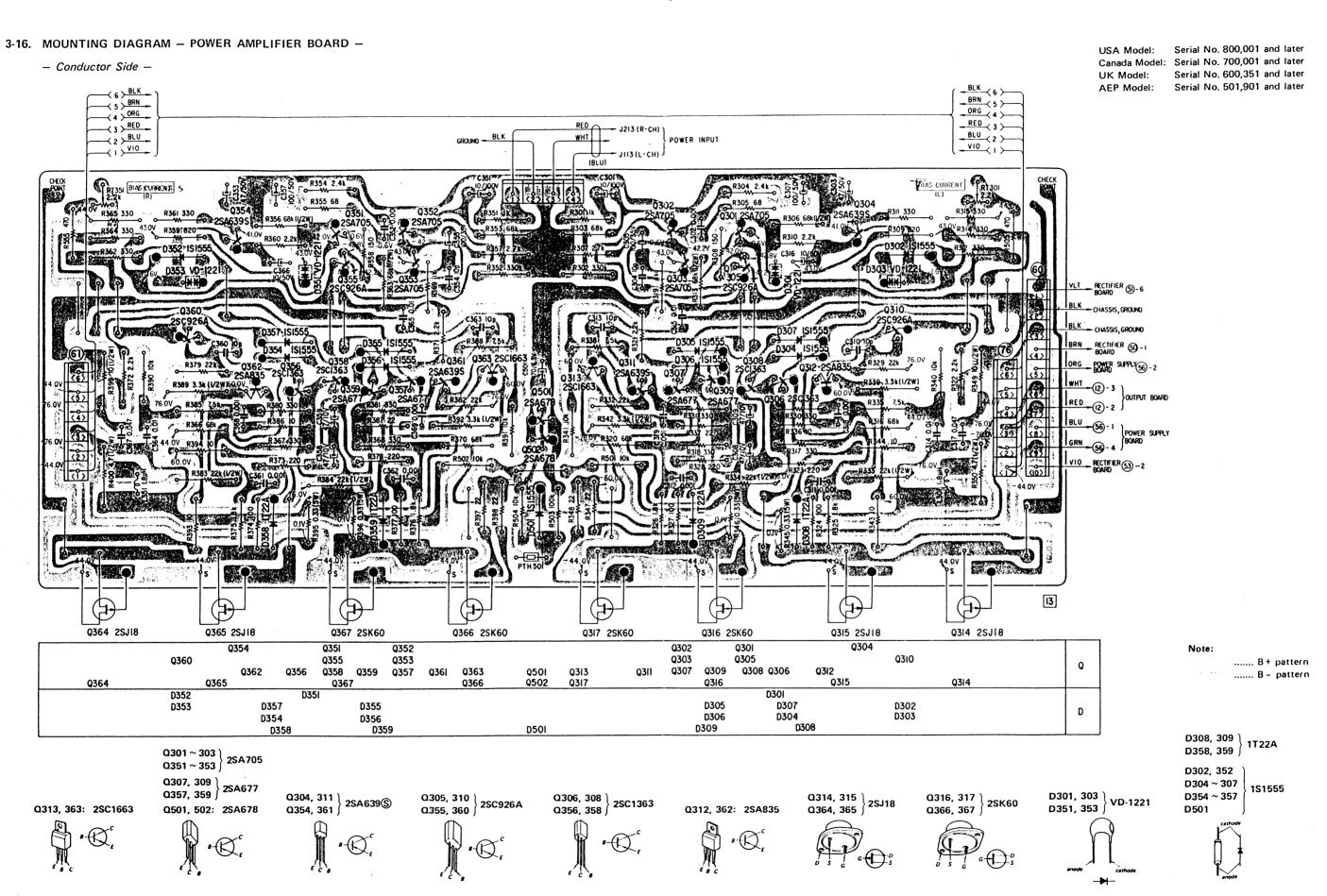
Note

All resistance values are in ohms. k = 1,000, M = 1,000 k All capacitance values are in μF except as indicated with p, which means $\mu \mu F$.

All voltages are dc measured with a VOM which has an input impedance of 20 k ohms/volt. No signal in.

Voltage variations may be noted due to normal production tolerances.

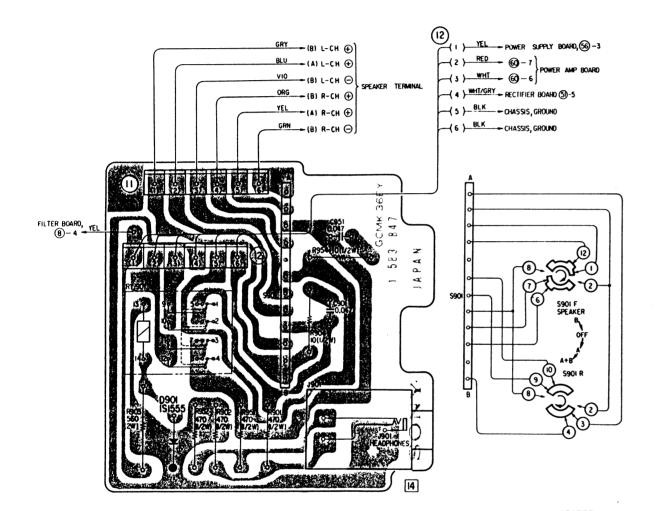




3-17. MOUNTING DIAGRAM - OUTPUT BOARD -

- Conductor Side -

USA Model: Serial No. 800,001 and later Canada Model: Serial No. 700,001 and later UK Model: Serial No. 600,351 and later AEP Model: Serial No. 501,901 and later

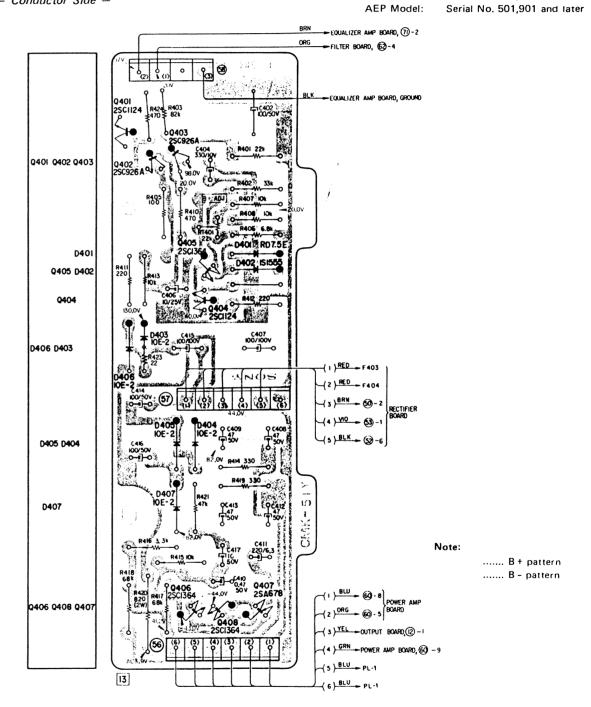


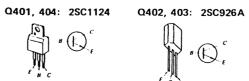


3-18. MOUNTING DIAGRAM - POWER SUPPLY BOARD -

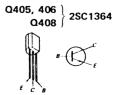
- Conductor Side -

USA Model: Serial No. 800,001 and later Canada Model: Serial No. 700,001 and later UK Model: Serial No. 600,351 and later



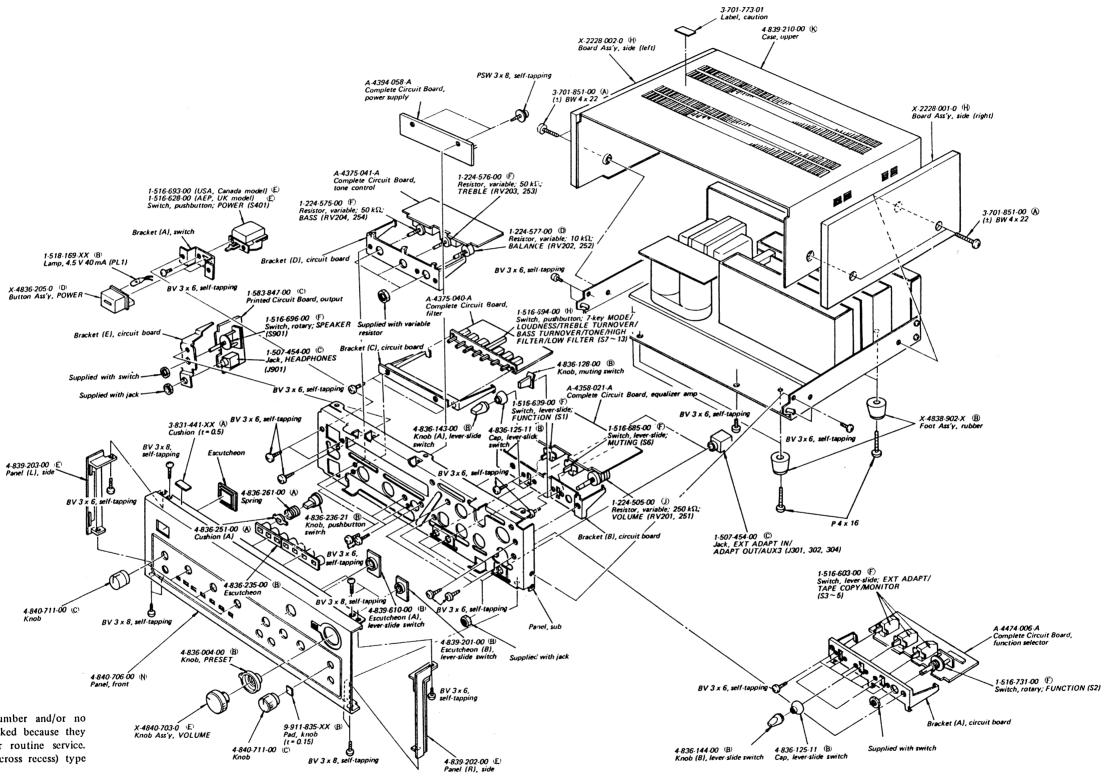






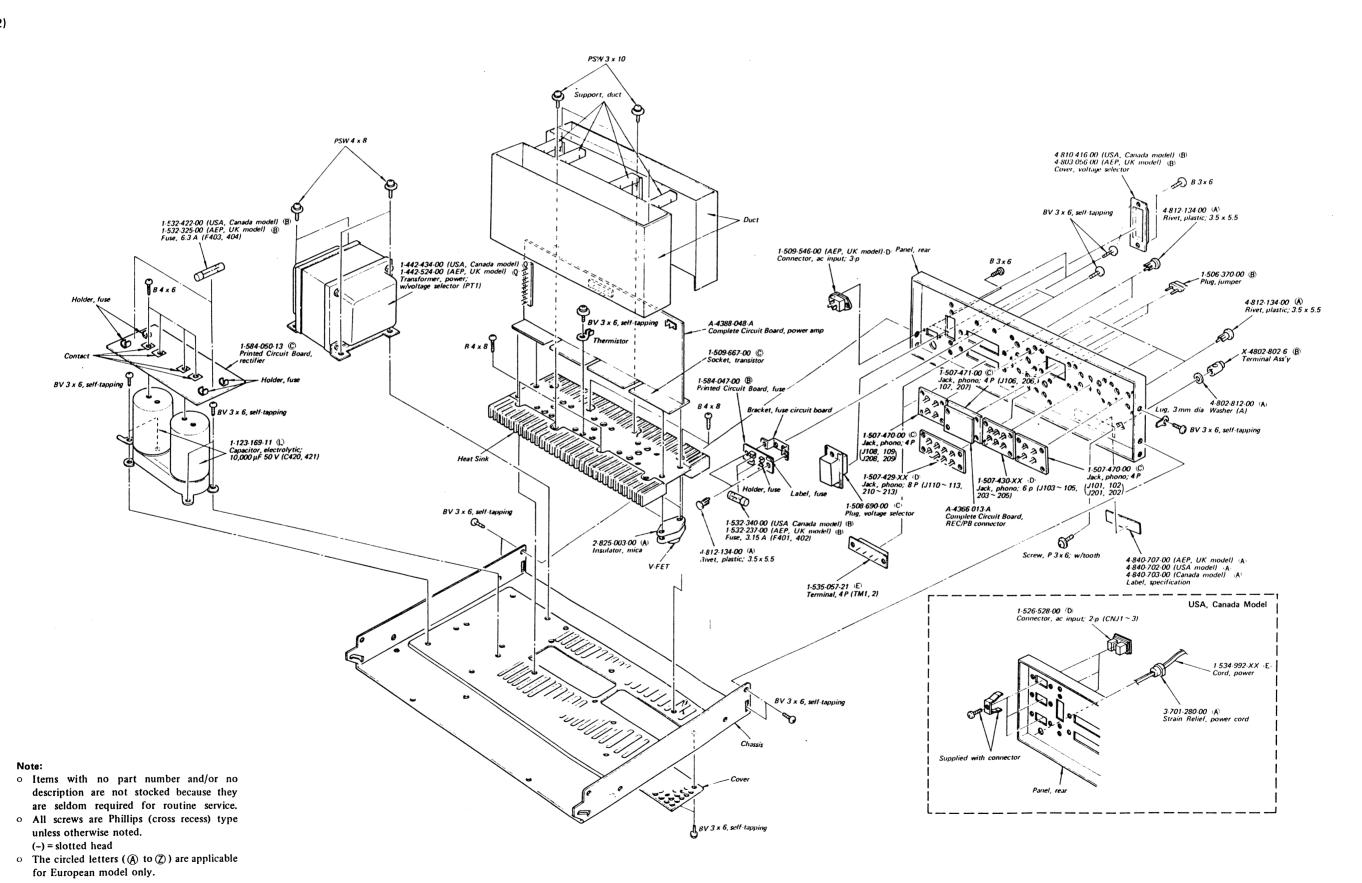


D401: RD-7.5E D402: 1S1555 D403~407: 10E-2 **EXPLODED VIEWS**



Note:

- Items with no part number and/or no description are not stocked because they are seldom required for routine service.
- All screws are Phillips (cross recess) type unless otherwise noted.
 - (-) = slotted head
- o The circled letters (A) to (2) are applicable for European model only.



SECTION 5 ELECTRICAL PARTS LIST

Note: The circled letters ($\mbox{\Large (A)}$ to $\mbox{\Large (Z)}$) are applicable for European model only.

Mark	Applicable Serial No.										
0	UK model: AEP model:	Up to Serial No. 600,350 Up to Serial No. 501,900									
	USA model: Canada model: UK model: AEP model:	Serial No. 800,001 and later Serial No. 700,001 and later Serial No. 600,351 and later Serial No. 501,901 and later									

					L.		AEP model:	Serial No. 501,901 and later
Ref. No.	Part No.		Description	Ref. No.	Part No.			Description
	COMPLETE C	IRCUIT BO	ARDS	Q314,364		_		
				Q315,365 ⁾		K	2SJ18	÷
	A-4358-021-A	Equalia	zer Amp	Q316,366				
	A-4366-013-A		B Connector	Q317,367 ⁾		(1)	2SK60	
	A-4375-040-A	Filter						
	A-4375-041A	TONE	Control	Q401		Œ.	2SC1124	
	A-4388-048-A	Power	Amp	Q402,403		Ō	2SC926A	
				Q404		C	2SC1124	
	A-4394-058-A	Power	Supply	Q405,406		B	2SC1364	
	A-4474-006-A	Functi	on Selector	Q407		C	2SA678	
				Q408		®	2SC1364	
	PRINTED CI	RCUIT BOA	ARDS	Q501,502		©.	2SA678	
	1-583-847-00	© Output	t		1	Diode	es	
	1-584-047-00	B Fuse				_		
	1-584-050-13	C Rectifi	er	D301,351		-	VD1221	
				D302,352		-	1S1555	
			_	D303,353		B	VD1221	
	SEMICO	NDUCTORS	6	D304~307 D354~357	1.	Ĉ	1S1555	
	Tra	nsistors						
				D308,358		: D	1T22A	
Q101,151		B 2SC16		D309,359'		Ü	11227	
Q102,152		E 2SK63						
		_		D401			RD7.5E	
Q201,251		© 2SK23		D402		_	1S1555	
Q202,252		© 2SA70		D403~407		_	10E-2	
Q203,253		© 2SK23		D408~411		C	U05E	
Q204,254		© 2SA70	5			_		
Q205,255 Q206,256)		© 2SK23	A	D501,901		₿	1S1555	
Q200,230				PTH501	1-800-340-21	(B	Thermisto	or (positive)
Q301~303		© 2SA70	5					
Q351~353'		_						
Q304,354		© 2SA63				COII	L	
Q305,355		D 2SC92 B 2SC13		1 201 251	1 407 503 00	. 7	Minner 1	
Q306,356		B 25C13	04	L301,351	1-407-592-00	A	Microindi	uctor 1.8μΗ
Q307,357		© 2SA67						
Q308,358		B 2SC13			TRAN	ISFO	RMER	
Q309,359		© 2SA67				_		
Q310,360		D. 2SC92		PT1	1-442-434-00	_		SA, Canada model)
Q311,361		© 2SA63	·9S	PT 1	1-442-524-00	Q	Power (A	EP, UK model)
Q312,362		€ 2SA83						
Q313,363		D 2SC16	63	1				

Note: The circled letters ($\textcircled{A} \ \ \,$ to $\textcircled{Z} \)$ are applicable for European model only.

All capacitors are in µF and electrolytic type unless otherwise indicated. 50 or less working volte type. 1001,002 -1,02-074-11 \$\hat{A}\$ 0.001 ceramic for electrolytic type. (p = \(\mu^{\frac{1}{2}} \) 0.001 ceramic for electrolytic type. (p = \(\mu^{\frac{1}{2}} \) 0.001 ceramic for electrolytic type. (p = \(\mu^{\frac{1}{2}} \) 0.001 ceramic for electrolytic type. (p = \(\mu^{\frac{1}{2}} \) 0.001 ceramic for electrolytic type. (p = \(\mu^{\frac{1}{2}} \) 0.001 ceramic for electrolytic type. (p = \(\mu^{\frac{1}{2}} \) 0.001 ceramic for electrolytic type. (p = \(\mu^{\frac{1}{2}} \) 0.001 ceramic for electrolytic type. (p = \(\mu^{\frac{1}{2}} \) 0.001 ceramic for electrolytic type. (p = \(\mu^{\frac{1}{2}} \) 0.001 0.00V 0.001. (col.) 0.001 0.00V 0.001 0.00V 0.001. (col.) 0.001 0.00V	Ref. No.	Part No.	Descri	otion	Ref. No.	Part No.	-	Descrip	tion
All capacitors are in μF and electrolytic type unless otherwise indicated. So or test working volts are omitted except for electrolytic type. (p = μμF) CO01,002 1-102-074-11		CAPA	CITORS			□ 1-121-748-11	A) 10	25 V	
All capacitors are in H ² and electrobytic type unless otherwise indicated. S0 or less working volts are omitted except for electrobytic type. (p = μμF) C001,002 1-102-074-11 Â 0.001 ceramic C303,353 1-123-058-11 Â 47 S0V ceramic C104,154 1-102-174-11 Â 10 100 C102,152 1-108-227-12 Â 0.001 mylar C303,355 1-121-597-11 Â 100 S0V C103,155 1-121-126-11 Â 10 100 C103,155 1-121-129-11 Â 100 S0V C103,155 1-121-129-11 Â 100 S0V C103,155 1-121-369-11 Â 100 S0V C103,155 1-103-730-11 Â 0.0016 polystyrol C313,363 1-102-947-11 A 10p ceramic C313,363 1-102-947-11 A 10p ceramic C313,363 1-102-947-11 A 10p ceramic C313,365 C104,154 1-108-237-12 A 0.011 mylar C313,365 C313,365		2			C301 351 <i>(</i>			100 V	
Solution Continue Continu	A	ll capacitors are	in μF and electrolyt	ic type			-		mylar
Color less working volts are omitted except for electrolytic type. (p = µµF) Color Col	uı	nless otherwise ir	ndicated.		-		-	50 V	
C001,002 1-102-074-11 & 0.001 ceramic C305,355 C3-1-121-419-11 & 200 6.3V C102,152 1-108-227-12 & 0.001 mylar C306,358 C309,359				xcept			~		ceramic
C101,151	fo	or electrolytic typ	pe. $(p = \mu \mu F)$		2301,331	1102 007 11	O • F		
C101,151	C001.002	1-102-074-11	(A) 0.001	ceramic	gans ass .	□ 1-121-419-11	® 220	6.3 V	
C102,151			_		C305,355 (■ 1-121-357-11	B 100	35 V	
C102,152	(301 151 (_		C307,357	1-123-059-11	B 100	50 V	
C103,153 (*1-121-559-11			_	mylar	C308,358		6 42	1037	
C104,154	•		T	•		1-121-927-11	B 41	10 V	
C104,154	C103 153 7								
C104,154		1 101 001			C310,360	1-102-947-11	10p		ceramic
C105,155	C104 154	1-103-743-11	(B) 0.0056	polystyrol					
C106			-	•		1-108-227-12	A 0.001		mylar
C107,157			_	• • •	1	1-102-947-11	A: 10p		ceramic
C109,159			_		l .		-		
C201,251 1-108-591-12	C107,157	1				1-108-239-12	A 0.01		mylar
C201,251 1-108-591-12	C100 150		_	•	0515,505				
C201,251 1-108-591-12	C109,139	1-102-907-11	W 22p	cciamic		n 1-121-469-11	A) 10	6.3 V	
C202,252 C203,253 1-102-973-11	C201 251	1 109 501-12	(A) 0.033	mylar	C316,366	ſ			
C203,253 1-102-973-11 A) 100p ceramic C317,367		1-100-371-12	W 0.033	iiiy iai		-1 100 244 12	_	50.	mylar
C205,255 (1-102-973-11	A 100p	ceramic	C317,367	(1.108.868.12	-		-
C206,256 (207,257) 1-108-555-12	C203,233	- 1 122 051 11	♠ 10 50¥	,		- 1-100-000-12	-		myiai
C206,256 C207,257 C208,258 C209,259 1-108-587-12	C205,255	1	_			1-108-227-12	A 0.001		mylar
C207,257		■ 1-121-120-11	W 10 100 v		C319,309				
C207,257	C206,256		0		C402	1-121-417-11	® 100	50 V	
C208,258 C209,259) C210,260 C210,260 C210,260 C211,261 C210,262 C210,262 C213,263 C		1-108-555-12	(A) 0.001	mylar	C404	1-121-805-11	_	10 V	
C209,259) 1-108-587-12 (A) 0.022 mylar (C406 (=1-121-398-11 (A) 10 25V (C210,260 1-108-591-12 (A) 0.033 mylar (C407 1-123-084-11 (C) 100 100V (C212,262 1-121-736-11 (B) 1000 10V (C410 1-121-726-11 (A) 0.47 50V (C411 1-121-419-11 (A) 220 6.3V (C412,413 1-123-058-11 (B) 47 50V (C412,413 1-123-059-11 (B) 100 50V (C414 1-123-059-11 (B) 100 50V (C416 1-108-597-12 (A) 0.056 mylar (C416 1-123-059-11 (B) 100 50V (C418,419 1-102-355-11 (A) 0.01 50V (C412,421 1-123-169-11 (L) 10000 50V (C412,421 1-123-077-11 (L) 10000 50V (C412,421 (L) 10000 50V (L) 10000 50V (C412,421 (L) 10000 50V (L) 100000 50V (L) 1000000 50V (L) 1000000000000000000000000000000000000									
C210,260 1-108-591-12	, i	1-108-587-12	(A) 0.022	mylar	C406				
C211,261 1-102-973-11		1-108-591-12	A : 0.033	mvlar	1			100 V	
C212,262 1-121-736-11	,	1 200 000 000	•	·					
C212,262 1-121-736-11	C211,261	1-102-973-11	A 100p	ceramic	C408,409	1-123-058-11	B 47	50 V	
C213,263 (1-121-995-11	C212,262	1-121-736-11	® 1000 10V	7	C410	1-121-726-11	A 0.47	50 V	
C214,264 1-108-559-12	6212.262	o 1-121-914-11	® 3.3 50V	7	C411	1-121-419-11	A 220	6.3 V	
C214,264 1-108-559-12	C213,263	(a 1-121-995-11	B 3.3 100V	7	C412,413	1-123-058-11	B 47	50 V	
C216,266 1-108-597-12	C214,264	1-108-559-12	0.0015	mylar	C414	1-123-059-11	B 100	50 V	
C216,266 1-108-597-12			-						
C217,267 1-108-587-12	C215,265	1-103-720-11		polystyrol	1	1-123-084-11	-		
C218,268 1-121-911-11	C216,266	1-108-597-12	(A) 0.056	mylar	E .	1-123-059-11			
C219,269 1-108-227-12 \textcircled{A} 0.001 mylar C420,421 1-123-169-11 \textcircled{C} 10000 50V C230,280 $\overset{\square}{\bullet}$ 1-121-914-11 \textcircled{B} 3.3 50V $\overset{\square}{\bullet}$ 1-121-95-11 \textcircled{B} 3.3 100V C231,281 $\overset{\square}{\bullet}$ 1-102-963-11 \textcircled{A} 33p ceramic C901.951 $\overset{\square}{\bullet}$ 1-108-244-12 $\overset{\square}{A}$ 0.033 mylar	C217,267	1-108-587-12	_	mylar	C417				
C230,280 (1-121-914-11 (B) 3.3 50 V	C218,268	1-121-911-11	(A) 0.47 50 V	<i>I</i>	C418,419	1-102-355-11	_	500 V	ceramic
C230,280 (1-121-995-11	C219,269	1-108-227-12	(A) 0.001	mylar	C420,421	1-123-169-11	<u>[</u> 10000	50 V	
C230,280 (1-121-995-11			_				_		
C231,281 • 1-102-963-11 (A) 33p ceramic (C901.951 (1-108-244-12 (A) 0.033 mylar	C230 290	/		7	C501	1			
7	C230,260	■ 1-121-995-11	® 3.3 100 V	1			-	6.3 V	
	C231,281	1 -102-963-11	A 33 p	ceramic	C901 951	1	_		=
					, 0,01,,51	` = 1-108-868-12	A 0.047		mylar

Note: The circled letters ((A) to (\overline{Z}) are applicable for European model only.

							ioi Europe	an	model only.
Ref. No.	Part No.		_	Descrip	tion	Ref. No.	Part No.		Description
	RESISTORS All resistors are in ohms. Regular type				S7~13	1-516-694-00	$\widehat{\mathbb{H}}$	Push, 7-key; MODE, LOUDNESS, TREBLE TURNOVER. BASS	
<u>+</u>	If resistors are in 5%, ¼W carbon re omitted.	and	composi	tion resi	istors				TURNOVER, TONE. HIGH FILTER, LOW FILTER
	heck the schema esistance values.				x)	S401	1-516-628-00		Pushbutton, POWER (AEP, UK model)
R 109 159	1 -244-913-11	Â	47 k	1/2 W	carbon		1-516-693-00	E:	Pushbutton, POWER (USA, Canada
	■ 1-244-899-11		12 k	1/2 W	carbon				model)
R 209, 259	1 -244-879-11	A	1.8 k	1/2 W	carbon	\$901	1-516-696-00	Ê	Rotary, SPEAKER
R306.356	1 -244-917-11	Â	68 k	1/2 W	carbon		1.0	cĸ	c
	1 -244-917-11		68 k	½ W	carbon		JA	ıck	5
R333,383		<u> </u>	22 k	1/2 W	carbon	/ CNJ001	1-509-549-00	R	Connector, REC/PB
R334,384	1-244-905-11	A	22 K	72 W	Carbon	CNJ1~3	1-526-528-00	-	Connector, ac; 2-p (USA, Canada
R339,389	1-211-650-11	A	3.3 k	½ W	carbon	ļ			model)
R342,392	1211 000 11	•	0 15 11				1-509-546-00	<u>D</u>	Connector, ac; 3-p (AEP, UK model)
R345,395 R346,396	1-217-157-11	A	0.33	5 W	wire-wound	J101,201 J102,202)	1-507-470-00	<u>Ĉ</u>	Phono, 4-p; PHONO 1, 2
R349,399	1-211-590-11	A	10	½ W	carbon	J102,202 J103~105		_	
R350,450	1-244-817-11	A	4.7	$\frac{1}{2}$ W	carbon	J203~205)	1-507-430-XX	D	Phono, 6-p; TUNER, AUX 1, 2
R420	1-206-662-11	A	820	2 W	metal oxide	J106,206 J107,207	1-507-471-00	Ĉ	Phono, 4-p; TAPE 1, REC OUT 1
R901,951 R902,952)	1-244-865-11	Â	470	1/2 W	carbon	J108,208 J109,209	1-507-470-00	Ĉ.	Phono, 4-p; TAPE 2, REC OUT 2
R903	1-206-658-11	A	560	2 W	metal oxide	J110~113		_	Phono, 8-p; EXT ADPT 2.
R904,905	1-211-590-11	A	10	½ W	carbon	J210~213)	1-507-429-XX	Đ	PRE OUT, POWER IN
RT301,351 RT401	1-224-489-00 1-224-250-XX	_	2.2 k 2.2 k		adjustable adjustable	J301,302 J304)	1-507-454-00	Ĉ	EXT ADAPT IN, ADAPT OUT, AUX 3
	1 1-224-505-00	-	250 k		ariable; VOLUME	J901	1-507-454-00	Ĉ	HEADPHONES
	2 1-224-577-00		10 k		ariable; BALANCE				
	3 1-224-576-00 4 1-224-575-00	-	50 k 50 k		ariable; TREBLE ariable: BASS				
R V 204, 254	1 1-224-373-00	C	, JUK	٧,	illavie, BASS		MISCEL	.LA	NEOUS
	sw	ITCI	HES			CP401	1-231-057-31	. <u>B</u>	Encapsulated Component (USA, Canada model)
S 1	1-516-699-00	F	Lever-s	lide. FU	NCTION	F401,402	(1-532-340-00	_	Fuse, 3.15A (USA, Canada model)
S2	1-516-731-00	_	Rotary				1-532-237-00		Fuse, 3.15 A (AEP, UK model) Fuse, 6.3 A (AEP, UK model)
S3~5	1-516-603-00	_	Lever-s	lide, EX	T ADAPT, TAPE	F403,404	$\binom{1-532-325-00}{1-532-422-00}$	_	Fuse, 6.3A (USA, Canada model)
S 6	1-516-685-00	Ē	COI Lever-s	PY, MO lide, MU		PL1	1-518-169-XX	B	Lamp, 4.5 V 40 mA
						RY901	1-515-257-00	Ĥ	Relay



Note: The circled letters ($\mbox{\Large (A)}\mbox{ to }\mbox{\Large (Z)}\mbox{\Large)}$ are applicable for European model only.

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
TM1,2	1-535-057-21 1-506-370-00	(E) Terminal, 4-p (B) Plug, jumper		ACC	ESSORIES
	1-508-690-00	© Plug, voltage selector		1-506-113-00	A Plug, short
	1-509-667-00	© Socket, transistor		1-534-819-11	© Cord, power (UK model)
	1-534-992-XX	E Cord, power (USA, Canada model)		1-534-754-12	© Cord, power (E model)
				3-780-566-11	(Canada, UK and AEP model)
				3-780-566-21	E Manual, instruction (USA model)
				3-793-520-82	A Card, guaranty (UK model)